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AT-1774/B
Docket No.: 510.1031
Date: February 10, 2006

In re application of: Winfried DEGEN, et al.
Serial No.: 10/066,881
Filed: February 4, 2002
For: FUEL CONDITIONING PROCESS

Sir:

Transmitted herewith is an **Appellants' Brief under 37 C.F.R. §41.37 (11 pages)** in the above-identified application.

- ☐ Small entity status under 37 C.F.R. 1.9 and 1.27 has been previously established.
☐ Applicants assert small entity status under 37 C.F.R. 1.9 and 1.27.
☒ No fee for additional claims is required.
☐ A filing fee for additional claims calculated as shown below, is required:

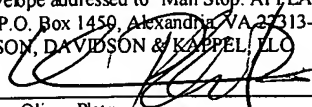
FOR:	(Col. 1)		(Col. 2)		SMALL ENTITY		OR	LARGE ENTITY	
	REMAINING	HIGHEST	AFTER	PREVIOUSLY	RATE	FEE		RATE	FEE
	AMENDMENT	PAID FOR		PRESENT					
TOTAL CLAIMS	* Minus 20	=		0	x \$ 9	\$		x \$ 18	\$
INDEP. CLAIMS	* Minus 3	=		0	x \$ 44	\$		x \$ 88	\$
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEP. CLAIM					+ \$150	\$		+ \$300	\$
TOTAL: \$							OR	TOTAL: \$	

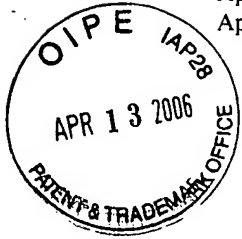
- * If the entry in Co. 1 is less than the entry in Col. 2, write "0" in Col. 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, write "20" in this space.
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- ☐ Also transmitted herewith are:
☐ Petition for extension under 37 C.F.R. 1.136
☐ Other
- ☒ Check(s) in the amount of **\$500.00** is/are attached to cover:
☐ Filing fee for additional claims under 37 C.F.R. 1.16
☐ Petition fee for extension under 37 C.F.R. 1.136
☒ Other: **Fee for Appellants' Brief**
- ☒ The Assistant Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 50-0552.
- ☒ Any filing fee under 37 C.F.R. 1.16 for the presentation of additional claims which are not paid by check submitted herewith.
☒ Any patent application processing fees under 37 C.F.R. 1.17.
☒ Any petition fees for extension under 37 C.F.R. 1.136 which are not paid by check submitted herewith, and it is hereby requested that this be a petition for an automatic extension of time under 37 CFR 1.136.


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I hereby certify that the documents referred to as attached therein and/or fee are being deposited with the United States Postal Service as "first class mail" with sufficient postage in an envelope addressed to "Mail Stop: APPEAL BRIEF - PATENTS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" on April 10, 2006
DAVIDSON, DAVIDSON & KAPPEL, LLC

BY: 
Oliver Platz



Application No.: 10/066,881
Appeal Brief dated April 9, 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Re: Application of: Winfried DEGEN, et al.
Serial No.: 10/066,881 Confirmation No.: 4821
Filed: 02/04/2002
For: FUEL CONDITIONING PROCESS
Art Unit: 1714
Examiner: Toomer, Cephia D.
Customer No.: 23280
Atty. Docket: 510.1031

Mail Stop: APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

April 9, 2006

APPELLANTS' BRIEF UNDER 37 C.F.R. § 41.37

Sir:

Appellant submits this brief for the consideration of the Board of Patent Appeals and Interferences (the "Board") in support of their appeal of the Final Rejection dated September 6, 2005 in this application. The statutory fee of \$500.00 is paid concurrently herewith.

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1. REAL PARTY IN INTEREST

The real party in interest is DaimlerChrysler AG, a German corporation having a place of business in Stuttgart, Germany, and the assignee of the entire right, title and interest in the above-identified patent application. The invention was assigned to DaimlerChrysler AG by inventors Winfried Degen, Erwin Loeffler, Carsten Plog, Melanie Schnell and Thomas Stengel. The assignment was recorded at reel 012718, frame 0836 on March 18, 2002.

2. RELATED APPEALS AND INTERFERENCES

Appellants, their legal representatives, and assignee are not aware of any appeal, interference or judicial proceeding that directly affects, will be directly affected by, or will have a bearing on the Board's decision in this appeal.

3. STATUS OF CLAIMS

Claims 1 to 8 are pending. Claims 1 to 8 have been finally rejected as per Final Office Action dated September 6, 2005.

The rejection to claims 1 to 8 thus is appealed. A copy of appealed claims 1 to 8 is attached hereto as Appendix A.

4. STATUS OF AMENDMENTS AFTER FINAL

No amendments to claims were filed after the final rejection. An advisory action was issued on February 22, 2006. A Notice of Appeal was filed on February 6, 2006 and received by the U.S.P.T.O. on February 8, 2006.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 recites a fuel conditioning method for internal combustion engines (see, e.g., paragraph [0017] of the specification, 3 in Figure 1) of motor vehicles, comprising passing nitrous gases through liquid fuel of a motor vehicle (see, e.g. paragraph [0020] of the specification) at a temperature of from 20°C to 150°C and at atmospheric pressure (see, e.g., paragraphs [0008], [0023] of the specification), the nitrous gases consisting essentially of at least one of nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide, and gaseous mixtures thereof (see, e.g., paragraphs [0008], [0018] of the specification) nitro compounds being formed in the fuel (see, e.g., paragraphs [0009], [0020]

of the specification) as a result of the passing of the nitrous gases through the fuel (see, e.g., specification at paragraph [0008], [0020] of the specification).

Independent claim 3 recited a method for operating a catalytic converter (see, e.g., paragraph [0017] of the specification, 8 in Figure 1) and conditioning fuel for an internal combustion engine (see, e.g. paragraph [0017] of the specification, 3 in Figure 1) of a motor vehicle comprising: producing nitrous gases using a storage-type catalytic converter (see, e.g., paragraph [0017] of the specification, 8 in Figure 1), the nitrous gases consisting essentially of at least one of nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide, and gaseous mixtures thereof (see, e.g., paragraphs [0008], [0018] of the specification), the catalytic converter adsorbing the nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide or gaseous mixtures thereof (see, e.g., paragraph [0017] of the specification) from exhaust gas of the internal combustion engine of the motor vehicle for concentration and desorbing the nitrogen monoxide, nitrogen dioxide dinitrogen monoxide or gaseous mixtures (see, e.g. paragraph [0018] of the specification); and passing the nitrous gases formed in the producing step through liquid fuel of the motor vehicle (see, e.g. paragraph [0020] of the specification) at a temperature of from 20°C to 150°C (see, e.g., paragraphs [0008], [0023] of the specification) and at atmospheric pressure, nitro compounds being formed in the fuel (see, e.g., paragraphs [0009], [0020] of the specification) as a result of the passing of the nitrous gases through the fuel.

Independent claim 5 recites a method for conditioning fuel and starting an internal combustion engine of a motor vehicle comprising the steps of passing nitrous gases through liquid fuel of the motor vehicle (see, e.g. paragraph [0020] of the specification) at a temperature of from 20°C to 150°C (see, e.g., paragraphs [0008], [0023] of the specification) and at atmospheric pressure, the nitrous gases consisting essentially of at least one of nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide, and gaseous mixtures thereof, (see, e.g. paragraph [0018] of the specification) nitro compounds being formed in the fuel (see, e.g., paragraphs [0009], [0020] of the specification) as a result of the passing of the nitrous gases through the fuel; and using the fuel after the passing step in a cold-start phase of the internal combustion engine of the motor vehicle (see, e.g. paragraphs [0011], [0021] of the specification).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 3 and 5 should be rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Whether claims 1 to 8 should be rejected 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, for reasons of record.

7. ARGUMENTS

Rejections under 35 U.S.C. §112, first paragraph

Claims 3 and 5 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Claim 3

The outstanding office action states that the ‘originally filed specification does not support a method for operating a catalytic converter alone or in combination with a method for conditioning fuel’ but admits that the present specification teaches using a catalytic converter for producing nitrous gases.

Claim 3 recites “A method for operating a catalytic converter and conditioning fuel for an internal combustion engine of a motor vehicle comprising:

producing nitrous gases using a storage-type catalytic converter, the nitrous gases consisting essentially of at least one of nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide, and gaseous mixtures thereof, the catalytic converter adsorbing the nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide or gaseous mixtures thereof from exhaust gas of the internal combustion engine of the motor vehicle for concentration and desorbing the nitrogen monoxide, nitrogen dioxide dinitrogen monoxide or gaseous mixtures; and

passing the nitrous gases formed in the producing step through liquid fuel of the motor vehicle at a temperature of from 20°C to 150°C and at atmospheric pressure, nitro compounds being formed in the fuel as a result of the passing of the nitrous gases through the fuel.”

Fig. 1 and the related description at [0018] describes one method of how the catalytic converter 8 is operated to produce nitrous gases: “The nitrogen oxides adsorbed in storage-type catalytic converter 8 can be desorbed, for example, via thermal heating of storage-type catalytic converter 8. The desorbed nitrogen oxides are fed to gassing unit 5 via a line 10” and are then used to condition the fuel. These steps described in the specification are clearly a

“method for operating a catalytic converter and conditioning fuel for an internal combustion engine of a motor vehicle” as claimed. Thermal heating of a catalytic converter is a method for operating the catalytic converter.

Claim 5: Argued Separately

With respect to claim 5, claim 5 recites a “method for conditioning fuel and starting an internal combustion engine of a motor vehicle comprising the steps of:

passing nitrous gases through liquid fuel of the motor vehicle at a temperature of from 20°C to 150°C and at atmospheric pressure, the nitrous gases consisting essentially of at least one of nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide, and gaseous mixtures thereof, nitro compounds being formed in the fuel as a result of the passing of the nitrous gases through the fuel; and

using the fuel after the passing step in a cold-start phase of the internal combustion engine of the motor vehicle.”

The specification at [0021] describes that the conditioned fuel is fed to the combustion engine as starting fuel, and [0011] states that the “fuel which has been treated with the nitrous gases can advantageously be used for the cold-start phase of the internal combustion engine.”

The specification thus explicitly describes a start phase of an internal combustion engine in which the conditioned fuel is used, and thus describes a “method for conditioning fuel and starting an internal combustion engine of a motor vehicle” as claimed in claim 5.

Withdrawal of the rejections to claims 3 and 5 under 35 U.S.C. §112, first paragraph is respectfully requested.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 1 to 8 were rejected 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “passing nitrous gases through liquid fuel of a motor vehicle at a temperature of from 20°C to 150°C and at atmospheric pressure, the nitrous gases consisting essentially of at least one of nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide, and gaseous mixtures thereof, nitro compounds being formed in the fuel as a result of the passing

of the nitrous gases through the fuel.”

Nitro compounds are compounds having the nitro group -NO_2 , and when the nitrous gases described in claim 1 are passed through the liquid fuel nitro compounds are formed. The specification very clearly describes how with the present invention organic nitro compounds can be formed (see [0023] describing C- NO_2 nitro compound). The claim is clear and it is not understood why or how further specification of the nitro compounds as organic or nonorganic in claim 1 is required under 35 U.S.C. 112, second paragraph. The specification clearly describes the formation of organic nitro compounds and this is sufficient to support the claim recitation of nitro compounds.

Withdrawal of the rejections to claims 1 to 8 under 35 U.S.C. §112, second paragraph is respectfully requested.

CONCLUSION

It is respectfully submitted that the application is in condition for allowance.
Favorable consideration of this appeal brief is respectfully requested.

Respectfully submitted,
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Application No.: 10/066,881
Appeal Brief dated April 9, 2006

APPENDIX A:

PENDING CLAIMS 1 TO 8 OF U.S. APPLICATION SERIAL NO. 10/066,881

Claim 1 (previously presented): A fuel conditioning method for internal combustion engines of motor vehicles, comprising:

passing nitrous gases through liquid fuel of a motor vehicle at a temperature of from 20°C to 150°C and at atmospheric pressure, the nitrous gases consisting essentially of at least one of nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide, and gaseous mixtures thereof, nitro compounds being formed in the fuel as a result of the passing of the nitrous gases through the fuel.

Claim 2 (original): The method as recited in Claim 1 wherein the nitrous gases are passed through the fuel in an atmosphere rich in oxygen or nitrogen.

Claim 3 (previously presented): A method for operating a catalytic converter and conditioning fuel for an internal combustion engine of a motor vehicle comprising: producing nitrous gases using a storage-type catalytic converter, the nitrous gases consisting essentially of at least one of nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide, and gaseous mixtures thereof, the catalytic converter adsorbing the nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide or gaseous mixtures thereof from exhaust gas of the internal combustion engine of the motor vehicle for concentration and desorbing the nitrogen monoxide, nitrogen dioxide dinitrogen monoxide or gaseous mixtures; and

passing the nitrous gases formed in the producing step through liquid fuel of the motor vehicle at a temperature of from 20°C to 150°C and at atmospheric pressure, nitro compounds being formed in the fuel as a result of the passing of the nitrous gases through the fuel.

Claim 4 (original): The method as recited in Claim 1 further comprising passing a

partial flow of exhaust gas from an internal combustion engine of the motor vehicle through the fuel.

Claim 5 (previously presented): A method for conditioning fuel and starting an internal combustion engine of a motor vehicle comprising the steps of:

passing nitrous gases through liquid fuel of the motor vehicle at a temperature of from 20°C to 150°C and at atmospheric pressure, the nitrous gases consisting essentially of at least one of nitrogen monoxide, nitrogen dioxide, dinitrogen monoxide, and gaseous mixtures thereof, nitro compounds being formed in the fuel as a result of the passing of the nitrous gases through the fuel; and

using the fuel after the passing step in a cold-start phase of the internal combustion engine of the motor vehicle.

Claim 6 (original): The method as recited in Claim 1 wherein a light-off temperature of exhaust gas aftertreatment catalysts is reduced via the treated fuel.

Claim 7 (original): The method as recited in Claim 1 wherein the fuel includes at least one of gasoline, Diesel fuel, kerosene and alcohol.

Claim 8 (original): The method as recited in Claim 1 further comprising using heat of at least one of a cooling system and heating system of the motor vehicle for controlling a temperature of the method.

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APPENDIX B

Evidence Appendix under 37 C.F.R. §41.37 (c) (ix):

No evidence pursuant to 37 C.F.R. §§1.130, 1.131 or 1.132 and relied upon in the appeal has been submitted by appellants or entered by the examiner.

APPENDIX C

Related proceedings appendix under 37 C.F.R. §41.37 (c) (x):

As stated in “2. RELATED APPEALS AND INTERFERENCES” of this appeal brief, appellants, their legal representatives, and assignee are not aware of any appeal or interference that directly affects, will be directly affected by, or will have a bearing on the Board’s decision in this appeal.